

To: P. Milgrom  
From: E. Kwerel  
Date: June 20, 2000 3:28  
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Paul:

Thanks again for responding to my question about ways to ensure the pace of an auction based on your "benchmark" design.

Could you please clarify your proposed package-specific activity rule:

1) Would this rule be imposed throughout the auction or only at the end when the pace of the auction is slowing? You seem to be suggesting that it would be imposed throughout the auction. Would bidders object that this excessively limits their ability to change strategies?

2) What is your view of implementing this rule as part of the following three stage activity rule:

Stage I: Bidders must be active on one package in each round. (The proposal in your initial letter describing the benchmark auction).

Stage II: Bidders must be active in each round on some percentage (e.g. 50%) of the bidding units for which they are currently eligible? (The activity rule in your Wye River proposal).

Stage III: In addition to the stage activity II rule, add the package-specific activity rule you describe below.

Evan  
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To: E. Kwerel  
From: P. Milgrom  
Date: June 20, 2000  
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Evan:

In response to your questions:

>1) Would this rule be imposed throughout the auction or only at the end  
>when the pace of the auction is slowing? You seem to be suggesting that it

>would be imposed throughout the auction. Would bidders object that this  
>excessively limits their ability to change strategies?

I was indeed suggesting applying this criterion throughout the auction.  
Again, the argument is heuristic: straightforward bidding is not impaired  
by the rule, but parking is severely limited right from the outset of the  
auction, which is generally a good thing.

The issue of activity rules restricting a bidder's "ability to change  
strategies" arises primarily from rules that restrict overall activity  
levels. Such rules prevent a bidder from bidding for a large package (one  
with many activity "points") after having first bid for a smaller package.  
This same problem arises in both the benchmark package auction and the  
simultaneous multiple round auction. I prefer to phrase the problem as  
follows: A bidder who would rather buy a small package rather than a large  
package at the prevailing prices early in the auction but whose purchase  
decision reverses as prices change may be restricted from bidding  
straightforwardly by a points-based activity rule.

Notice, however, that the proposed package-specific activity rule never  
restricts straightforward bidding. It does restrict many kinds of parking  
strategies, which is just the point. I cannot predict all the more  
sophisticated strategies that consultants may recommend that might be  
prohibited by this rule, and I acknowledge that my heuristic gives weight  
only to straightforward bidding in determining which strategies must not be  
restricted.

>2) What is your view of implementing this rule as part of the following  
>three stage activity rule:

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>Stage I: Bidders must be active on one package in each round. (The  
>proposal in your initial letter describing the benchmark auction).

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>Stage II: Bidders must be active in each round on some percentage (e.g.  
>50%) of the bidding units for which they are currently eligible? (The  
>activity rule in your Wye River proposal).

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>Stage III: In addition to the stage activity II rule, add the  
>package-specific activity rule you describe below.

I don't believe the Stage I rule is acceptable. If such a rule were adopted  
and I were advising a client, I would tell them to park during Stage I.

Many other consultants would do the same. Recall that the benchmark proposal has developed in a series of steps. It began as something that works well when there is straightforward bidding, without regard to bidder incentives or time to completion. More aggressive minimum bid rules and activity rules were added to speed up the auction and to eliminate the most severe incentive problems. Ideally, something close enough to straightforward bidding is now a viable strategy to make the kind of near-efficient outcomes found in the Cybernomics experiments also occur in the FCC auction implementation.

The Stage II rule together with a minimum bid rule that ensures seriousness of bids might make the package-specific rule unnecessary. However, particularly given the very short notice which prevents a thorough exploration of parking strategies, I strongly recommend having this Stage III rule in the auctioneer's arsenal as a kind of guarantee that the auction will not "stall."

Paul Milgrom